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**Presentations on Perchlorate at the Annual Meeting
of the American Chemical Society (ACS)**

- The annual meeting of the ACS will take place August 22-26 in New Orleans. There are six different sessions under the general heading, "Perchlorate in the Environment."
- Researchers from EPA's Office of Research and Development (ORD), National Exposure Research Laboratory (NERL), are co-authors on five related papers being presented on field studies of perchlorate, focusing on accumulation of perchlorate in soils and crops.
- Perchlorate (ClO_4^-) is a chemical that has been found to contaminate ground and surface waters, where it is mobile and can persist for many decades. A major source of contamination has been the disposal of perchlorate following its manufacture and use as a propellant for rockets and fireworks. Recent research by NERL has revealed that it is also present in some commercial fertilizers. The potential for this new source to contaminate soil or to transport into water resources has not yet been characterized.
- Because perchlorate may be present in fertilizers or irrigation water, NERL researchers are studying the potential uptake of perchlorate by crops. Two of the papers being presented discuss the preliminary findings of this research. These studies found that lettuce and mustard plants can take up perchlorate and accumulate it in their leaves, stems, and roots.
- Additional experimental work is needed to confirm these preliminary findings. Further studies also are needed to understand the soil and growth conditions under which accumulation may occur and what kinds of crops are affected. To date, agricultural commodities have not been systematically analyzed for perchlorate content.
- Other perchlorate papers being presented deal with the sorption of perchlorate to various types of soils; the potential use of plants to take up perchlorate at contaminated sites (phyto-remediation); and the break down of perchlorate in fresh water sediments.
- NERL findings about perchlorate will be incorporated into a risk assessment being developed by ORD's National Center for Environmental Assessment (NCEA). The perchlorate risk assessment is part of an interagency effort involving representatives from 22 different federal, tribal, state, and local governmental agencies looking at detection, risks, and control measures for perchlorate.
- This risk assessment will evaluate potential exposure both through drinking water (as a result of groundwater contamination) and from food (from fertilizer or contaminated irrigation water). Perchlorate is of potential concern given that it affects the thyroid system at high doses.

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